

CLAIMS

1. (a) A DNA exhibiting a promoter activity for an angiopoietin-related growth factor, and consisting of a nucleotide sequence in which 1 to 10 nucleotides are substituted, deleted, added, and/or inserted in the nucleotide sequence consisting of nucleotides 2705-3001 of SEQ ID NO: 1, or
(b) a DNA exhibiting a promoter activity for an angiopoietin-related growth factor, and consisting of a nucleotide sequence having a 90% or more homology with that consisting of nucleotides 2705-3001 of SEQ ID NO: 1.
2. A DNA consisting of the nucleotide sequence consisting of nucleotides 2705-3001 of SEQ ID NO: 1.
3. A recombinant vector characterized by comprising the DNA according to claim 1 or 2 and exhibiting a promoter activity for an angiopoietin-related growth factor.
4. A transformant characterized by comprising the DNA according to claim 1 or 2 and exhibiting a promoter activity for an angiopoietin-related growth factor.
5. A method for screening an antiobesity agent, an antidiabetic agent, and/or a hypolipidemic agent, characterized by comprising the steps of:
 - i) bringing a substance to be tested into contact with the transformant according to claim 4, and
 - ii) measuring a promoter activity for an angiopoietin-related growth factor and analyzing a test substance dependent change in the promoter activity.
6. The screening method according to claim 5, wherein the transformant contains a reporter gene located downstream of the DNA according to claim 1 or 2, and the promoter activity for an angiopoietin-related growth factor is measured by analyzing an expression of the reporter gene.
7. A nonhuman knockout animal characterized in that a polynucleotide encoding an angiopoietin-related growth factor is functionally deficient on a chromosome.
8. A nonhuman transgenic animal which is a nonhuman animal or an offspring animal thereof obtained by ontogenesis from totipotent cells in which a polynucleotide is introduced

together with a CAG promoter, wherein the polynucleotide is carried on a chromosome, a polypeptide encoded by the polynucleotide is expressed in a somatic cell, and the polypeptide is selected from the group consisting of:

(a) a polypeptide exhibiting an activity of suppressing an increase in body weight, and comprising an amino acid sequence consisting of amino acids 1-450 of SEQ ID NO: 3 or amino acids 1-433 of SEQ ID NO: 5,

(b) a polypeptide exhibiting an activity of suppressing an increase in body weight, and comprising an amino acid sequence in which 1 to 10 amino acids are substituted, deleted, and/or inserted in an amino acid sequence consisting of amino acids 1-450 of SEQ ID NO: 3 or amino acids 1-433 of SEQ ID NO: 5,

(c) a polypeptide exhibiting an activity of suppressing an increase in body weight, and encoded by a DNA which hybridizes under stringent conditions to a DNA encoding an amino acid sequence consisting of amino acids 1-450 of SEQ ID NO: 3 or amino acids 1-433 of SEQ ID NO: 5, and

(d) a polypeptide exhibiting an activity of suppressing an increase in body weight, and comprising an amino acid sequence having a 95% or more homology with that consisting of amino acids 1-450 of SEQ ID NO: 3 or amino acids 1-433 of SEQ ID NO: 5.